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ABSTRACT

Information concerning children's knowledge of and interest in sport and physical activities was sought in a study of the aims and methods of physical education instruction at elementary levels (age 7-12). Factors in the children's immediate environment, presumed to influence interest in physical activities, were also investigated. These include: the children's attitudes toward sport and gymnastics; the children's knowledge of and participation in sport; the children's physiological status; and the influence exerted by family, friends, and the local community on the children's attitudes towards physical activity. Information was acquired by several different methods. Motor capacity was explored by means of a test battery incorporating several different tests of strength, coordination, and circulation. Interests, attitudes, and experiences in physical education were determined by questionnaire and interview responses. The cognitive dimension of the children's conceptions of sport was tested with the aid of a specially constructed test that required the children to look at pictures of different sports and then identify the sport, its characteristics, and the rules of play. To supplement the information gathered from the children, parents completed questionnaires concerning the parents' leisure and sporting pursuits, sporting interests, attitudes towards their children's sporting activities, and appraisals of their children's physical status. The children's teachers completed a similar questionnaire. Final results are not reported in this document. (MM)

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Title of project: Gymnastic activities in school (the GAIS project)

Project number: 207

In progress at: The Department of Educational Research, Mölndal School of Education

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Purpose

The main purpose of the project is to investigate the aims and methods of PE at the junior and middle levels of elementary school (ages 7-12) in relation to the children's physical development and their knowledge of and interest in physical exercise at different ages. Certain factors in their immediate environment which can be presumed to influence the children's interest in physical activities will be studied on a limited scale.

Subordinate to the main purpose, an investigation will also be made of the following:

- the children's attitude to sport and gymnastics
- the children's knowledge of and participation in sport
- the children's physiological status in a limited sense
- the influence exerted by the family, friends and the local community on the children's attitude to physical activity.

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The following can be mentioned as examples of the points of inquiry which stem from the above stated purposes and on which we expect to be able to shed light in the course of this study.

What are the adequate objectives of PE at junior and middle levels? How are they to be defined? How unanimous are "experts" concerning these objectives? What is the degree of consensus between this expert opinion, the content of teacher training and school PE curricula? Do pupils change their attitudes to PE (and to physical activity and sports generally) during junior and middle level, and if so in what way?

What are the factors influencing such changes of attitude and interest as occur?

What is the general standard of physical fitness among junior and middle level children? How does their physical fitness affect their attitude to PE? Do the sexes differ in their interest in and knowledge of sport and in terms of physical capacity?

Background and assumptions

Behavioural research with reference to PE and sport is a very recent phenomenon in Sweden (cf. Patriksson 1973). At the end of the 1960s, however, a number of projects were started which centred on the teaching of PE. This happened after a conference on the subject organized by the NBE in 1967 had revealed that insufficient research had been done into various problems connected with the teaching of PE. As a result, two surveys were started of the senior level of elementary school and of upper secondary school, concerning among other things the objectives of PE as seen by teachers and students, the interest taken

by students in the various parts of PE at school and their interest in sporting activities in their leisure time (Engström 1972, Hedberg 1972).

At this point a need was felt for knowledge concerning the way in which PE instruction and sport generally were experienced at junior and middle level. As in so many other fields, attitudes to physical activity are probably established at an early stage, in which case it is important to know how this is experienced by children.

In the school year 1972/73 a research group headed by Lennart Levin received a grant from the NBE for a project (the GAIS project) aimed at exploring and studying PE at the junior and middle levels of elementary school.

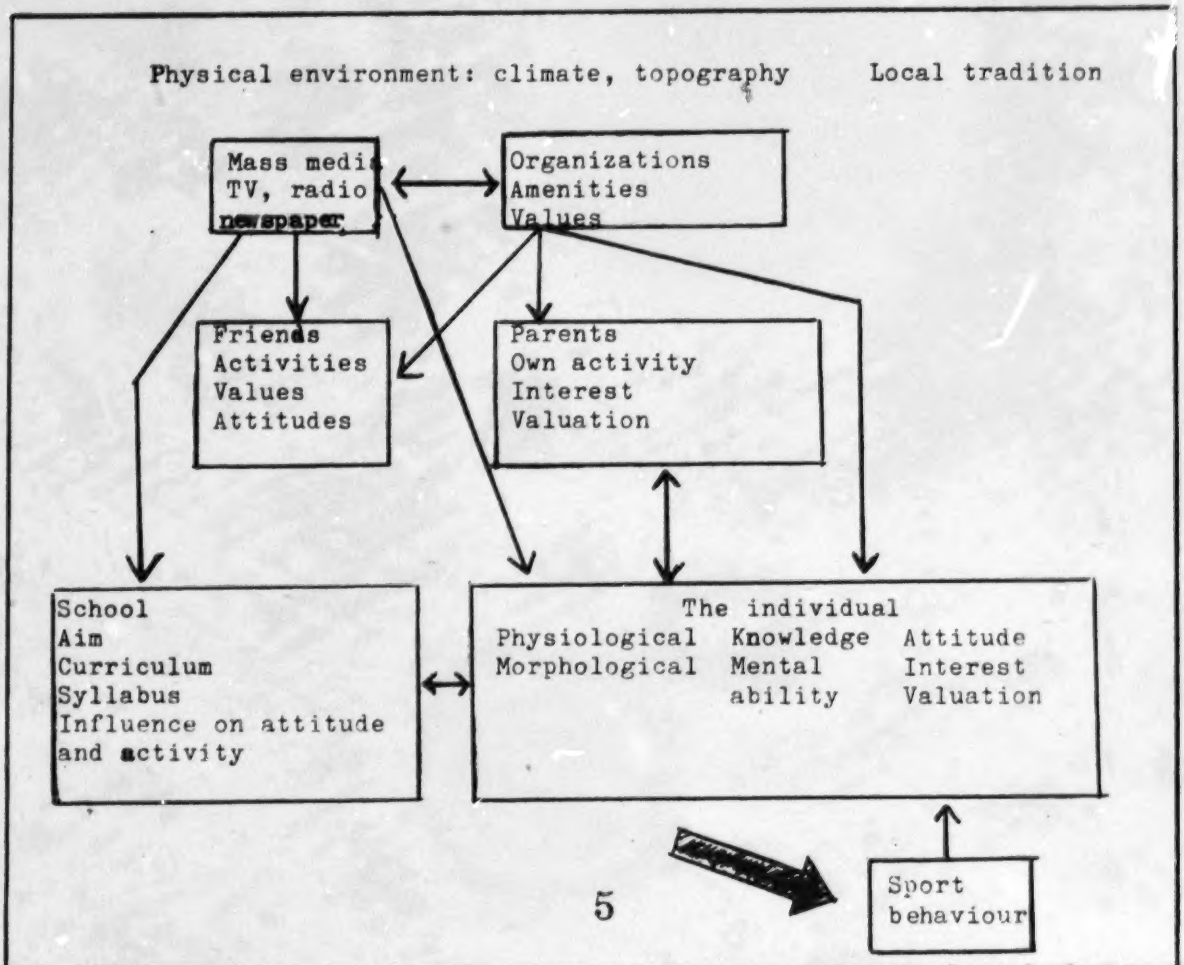
When children start school, this is probably the first occasion on which they are induced to take part in systematic physical activity. Although beginners vary in their interest and proficiency in sporting activities, we believe that the great majority of them are favourably disposed towards PE at school. In order for this positive basic attitude to be consolidated and in order for the children to find physical activity meaningful and stimulating, the repertoire of exercises in school should correspond to the children's physical development and the knowledge and experience which the children already possess should be utilized in teaching. It is particularly important to avoid regarding PE in isolation from the rest of the children's world.

In modern society, sport is an institution which engages the attention of many people, from active exponents at various levels to the service corps of the sporting world (coaches and trainers, referees, administrators etc.) and the excessively large body of consumers (spectators). The

sports movement can therefore be said to have an intricate social network and to reach large numbers of people in various ways. Children too are probably reached by these sporting amenities, one way or another. They presumably acquire some knowledge of sport and some idea of what sport is through the influence exerted by their parents, through contact with each other and from the information supplied by mass media.

Figure 1 is a summary of the factors influencing the sports behaviour of children.

Figure 1. The individual's socialization into sport



The following general assumptions have been made on the strength of these arguments (after Aggestedt & Tebelius 1974):

a) Knowledge and ideas concerning sport in relation to the capacity of the individual student for various motoric activities create certain expectations and ideas concerning the content of PE.

b) The degree of congruence between a student's expectations and the actual design of PE will influence the student's future attitude to physical activity.

This argument has led us to adopt the general working hypothesis that school poses inadequate demands for the majority of children and provides insufficient opportunities of choice at junior and middle level. Most children can already ride a bicycle, swim, skate, play football etc. when they are of pre-school age. At the same time we know that modern urban planning and a dangerous traffic environment often closely circumscribe children's opportunities of natural physical extivity.

For these and other reasons, one of the important duties of school must be to provide students with allround motoric training and at the same time to inculcate a lasting interest in sport and other forms of physical activity.

To achieve these ends, schools must consider the total situation of the children and the influence to which they are subjected outside school by parents, friends, clubs and mass media. The planning of PE on the basis of such considerations demands close familiarity with the children's physical and social circumstances and with their interests and knowledge.

Investigation methods and instruments

The GAIS project aims at acquiring a certain amount of knowledge which will help to make PE instruction as meaningful and relevant as possible. We are trying to acquire this knowledge by several different means. One way of approaching the problem is to analyse the objectives of PE as described in various goal documents in Sweden and other countries, above all in the Nordic area. A similar approach is to be seen in the attempts being made to scrutinize various taxonomies of the objectives of PE. This work is being done under the auspices of the project by Lisbeth Wistrand, who has also carried out an "analysis of demands" concerning the objectives of PE as expressed by various "experts".

"Expert" here refers to a teacher trainer of one kind or another. Teacher trainers have been given a number of open-ended questions concerning the general objectives of PE, objectives referring to particular school levels, and objectives of PE in relation to the overriding objectives of school. Their replies are now being processed and analysed.

Another way of acquiring knowledge is to study PE classes. This part of the study is being done by Bert Aggestedt and Ulla Tebelius.

Information concerning students has been acquired by several different methods, the aim being to acquire a total picture of the individual, i.e. including both intellectual and emotional as well as physical-motor aspects.

The children's physical-motor capacity has been explored by means of a test battery with measurements comprising several different tests of strength, co-ordination and circulation. All of these tests have been individually administered to the 1,300 or more children from grades 1-6 of elementary school taking part in the study. Extensive preparations were needed before the test battery could be finalized, since hardly any research has been done previously in this field for the ages concerned (7-12 years).

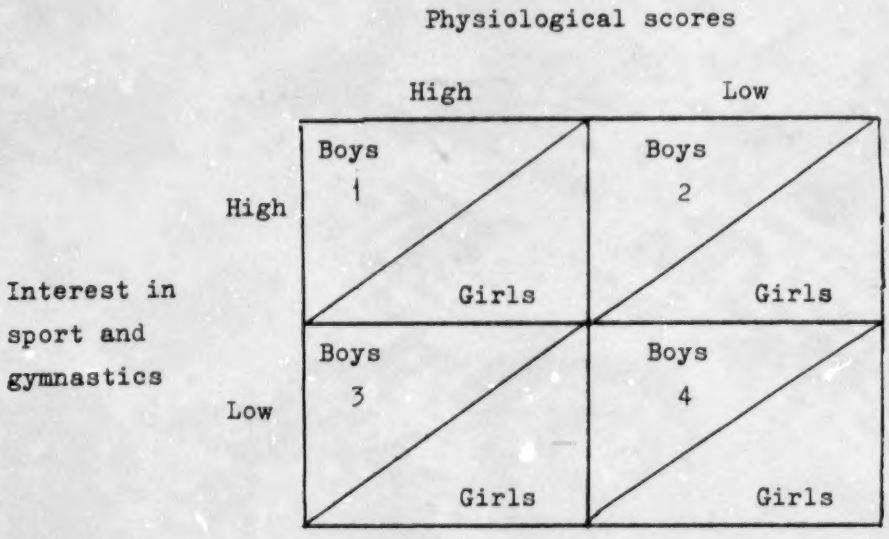
We have tried to capture the children's interests, attitudes and experiences of PE and sport by means of a simple questionnaire (interviews in grades 1 and 2). The cognitive dimension of the children's conception of sport was tested with the aid of a specially constructed knowledge test comprising pictures from which the children had to identify different sports, together with their characteristics and rules.

To supplement the information thus supplied by the children, their parents were asked to complete a questionnaire form which among other things included questions concerning the parents' leisure and sporting activities, their sporting interests, their attitudes to the children's sporting activities and their appraisals of the children's physical status. The children's teachers were also given a questionnaire including questions about their sporting interests and their opinions concerning the objectives and content of PE.

The follow-up study

A follow-up study has been made of certain interesting extreme groups of students in order to achieve greater penetration of various problem fields of vital importance to the project. It was possible, on the foundation of the

previous wide-ranging and exploratory main survey, to make a focused selection of subjects. By using data collected previously we were able to isolate children with high and low scores in different physiological tests as well as those taking very little or very great interest in sport and gymnastics. The following table shows the various sub-groups which we were able to identify.



Of these four groups we were particularly interested in the "extreme groups" in squares 1 and 4, i.e. those with high and low levels of involvement in sport and gymnastics. To keep the sample within bounds, we only included children who were in grades four and seven in the school year 1974/75. These children were in grades three and six respectively the previous school year (1973/74), when the main survey was conducted. This procedure makes it possible for us to study how these groups of children experience the transition from junior to middle level and from middle to senior level respectively.

More than 100 children were interviewed concerning their experience of PE at school, their self-image, their body-image, modes of influence concerning sport and gymnastics (significant others), their motives for physical movement etc. The interviews were relatively open-ended, there being no ready-made answers for the children to choose from. On the other hand there were certain themes (cf. supra) which had to be covered by each interview. All the interviews were tape recorded, and they will for the most part be analysed by qualitative methods, to supplement the enormous amount of quantitative data yielded by the main study.

Reporting and results

Apart from the main study, the GAIS project has included a number of separate investigations. The most extensive of these was the survey of low-motivated PE pupils in the Municipality of Karlstad (Setterlind 1973, Gustavsson & Olsson 1973, Setterlind 1975). Among other things this survey showed that the low-motivated students:

- were more negative towards school attendance than the control group
- were generally more negative than the control group towards the various aspects of PE lessons
- were particularly negative concerning strenuous exercises such as strength and fitness training and exercises where failure is easily perceived by others in the class, e.g. apparatus exercises, ball games and athletics
- were more negative than the control group towards competitions, especially individual ones, and to grade tests
- experienced failure more frequently than the control group and were seldom satisfied with their efforts during PE lessons

- were half as active as the control group regarding physical exercise during leisure time

- did not differ from the control group in terms of marks, except in PE, where the low-motivated children had lower marks

- did not tend to take the general (=easier) mathematics and English courses to a greater extent than the control group, except in the case of grade 7 boys

- were definitely inferior to the control group in the tests used to measure co-ordination and strength but also in the test used to measure oxygen uptake capacity

- did not differ from the control group in terms of build (height-weight ratio), except for grade 7 boys, who were more overweight.

The Karlstad study also included an experimental scheme of special PE lessons for low-motivated children. The report on the study deals among other things with the experiences and attitudes of children and teachers concerning these experimental activities.

One of the purposes of the experiment was to get to know a small group of low-motivated children more closely and, in favourable surroundings, to establish better contact between pupils and teachers, thereby increasing the teachers' awareness of the special problems of low-motivated children.

The instructions for the experiment provided that the children were to take part in the planning of their instruction and that they were to be encouraged to act independently and to assume responsibility. Teaching was to be aimed at the utmost possible degree of individualization.

Both children and teachers were highly positive towards the experimental scheme and would have liked it to continue for a longer period and with more teaching periods per week.

The main studies under the GAIS project have been covered by a report by Aggestedt & Tebelius (1974) in which the theoretical frame of reference of the project, together with its arrangement and the construction of instruments are described in detail. A preliminary report of findings (Aggestedt & Tebelius 1975) has also been published. This report describes the survey populations (children, parents, teachers), drop-outs, and sports amenities in the area where the survey was conducted (Alingsås), and it also analyses certain questions from the questionnaire. Concerning the latter, we may mention the fact that parents have a generally positive towards sporting activities by their children even if they themselves are not active in this context. But it is when parents are highly involved in sport that they appear to influence their children´s choices of sporting activity and the intensity of such activity to any significant degree.

The most important qualitative influence is exerted by the children themselves upon each other. Because such a large proportion of children go in for sporting activities, and because most of them have friends who do the same, children have extensive opportunities of practising sports together with their friends. In doing so they also acquire impulses for new development and the acquisition of new knowledge.

The popularity of PE in schools has been affirmed by a number of previous studies, and "our" children displayed the same attitude. We also observed, however, that the extremely positive interest shown at junior level gradually declined until grade 4, when it began to increase again.

Interest also declined at middle level, particularly in grade 5 and mainly among boys. Our hypothesis is that the decline is due to the children's increasing opportunities of comparing PE at school with "real sport".

The final reports on the project are expected to be completed in the autumn of 1976.

References

Aggestedt, Bert & Tebelius, Ulla (1974): Children - School - Sport. A social-psychological and physiological study of sport behaviour among children. Part 1. Theoretical frame of reference and construction of instruments. Report No. 61 from the Institute of Education, Mölndal School of Education. (In Swedish)

Aggestedt, Bert & Tebelius, Ulla (1975): Children - School - Sport. Part 2. Description of the locality. Influence exerted by parents, friends and teachers. Report No. 72 from the Institute of Education, Mölndal School of Education. (In Swedish)

Engström, Lars-Magnus (1972): Sport in leisure time. A questionnaire study of grade 6 children. Report No. 103 from the Department of Educational and Psychological Research, Stockholm School of Education. (In Swedish)

Gustavsson, Solveig & Olsson, Lisbet (1973): Attitudes and attitude changes in PE. Interview and questionnaire study of a group of grade 9 students judged in grade 7 to be low-motivated in PE. Essay No. 15 from the Institute of Education, Mölndal School of Education. (In Swedish)

Pno. 207

Hedberg, Gudrun (1972): PE in upper secondary schools. Historical background, together with teachers' and students' viewpoints concerning the present-day structure of the subject. Pedagogiska rapporter nr 15. Umeå University and School of Education. (In Swedish)

Patriksson, Göran (1973): The history of sport in a sociological perspective. Stockholm: Utbildningsförlaget Liber. (In Swedish)

Setterlind, Sven (1973): The teaching of PE in grades 7 and 8. A questionnaire study in the Municipality of Karlstad, 1970-71. Report No. 40 from the Institute of Education, Mölndal School of Education. (In Swedish)

Setterlind, Sven (1975): Low-motivated PE pupils. A comparative study of attitudes, marks and physiological status among grade 7 and 8 pupils. Report No. 65 from the Institute of Education, Mölndal School of Education. (In Swedish)

Reports

The following reports have been published in the series entitled "Reports from the sport and gymnastics project":

Levin, Lennart (ed.) et al. (1971): Report from a conference on PE pedagogics. Report No. 25 from the Institute of Education, Mölndal School of Education. (In Swedish)

Setterlind, Sven (1973): The teaching of PE in grades 7 and 8. A questionnaire study in the Municipality of Karlstad 1970-71. Report No. 40 from the Institute of Education, Mölndal School of Education. (In Swedish)

Gustavsson, Solveig & Olsson, Lisbet (1973): Attitudes and attitude changes in PE. Interview and questionnaire study

of a group of grade 9 students judged in grade 7 to be low-motivated in PE. Essay No. 15 from the Institute of Education, Mölndal School of Education. (In Swedish)

Bengtsson, Lars-Erik & Idogård, Lennart (1974): Connections between general ability, sporting knowledge and sporting interests in grades 3 and 6. Essay No. 24 from the Institute of Education, Mölndal School of Education. (In Swedish)

Christopherson, Viveka & Gustavsson, Ulla (1974): A study of sporting knowledge among 10 and 13-year-olds who regularly take part in sporting activities of different kinds. Essay No. 30 from the Institute of Education, Mölndal School of Education. (In Swedish)

Aggestedt, Bert & Tebelius, Ulla (1974): Children - School - Sport. A social-psychological and physiological study of sport behaviour among children. Part 1. Theoretical frame of reference and construction of instruments. Report No. 61 from the Institute of Education, Mölndal School of Education. (In Swedish)

Kinnrell, Ingvar & Sjöberg, Lars-Erik (1975): Sport as a social activity. Report No. 63 from the Institute of Education, Mölndal School of Education. (In Swedish)

Setterlind, Sven (1975): Low-motivated PE pupils. A comparative study of attitudes, marks and physiological status among grade 7 and 8 pupils. Report No. 65 from the Institute of Education, Mölndal School of Education. (In Swedish)

Grennäs, Christina & Grennäs, Torsten (1975): Sport in children's books. Essay No. 36 from the Institute of Education, Mölndal School of Education. (In Swedish)

Pno. 207

Aggestedt, Bert & Tebelius, Ulla (1975): Children - School - Sport. Part 2. Description of the locality. Influence exerted by parents, friends and teachers. Report No. 72 from the Institute of Education, Mölndal School of Education. (In Swedish)

Patriksson, Göran (1976): Attitudes of young people to Olympic games. Essay No. 42 from the Institute of Education, Mölndal School of Education. (In Swedish)

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